Apparatus for analysis of a complex system comprising elements to determine the effective elements of a system in carrying out a given task, the apparatus comprising: a sampler for carrying out successive silencing operations comprising silencing elements and combinations of elements of the system and measuring results of the given task, a predictor for providing predictions for predicting results for the given task for further element silencing combinations, and a contributions calculator for using said measured results and said predicted results to generate Shapley value predictions for said elements as indicators of an effectiveness of a respective element in carrying out the given task.